

Commercial Aviation

SIMPLIFIED INTERCEPTION

A New Method of Solving a Problem Often Faced by Charter Pilots

TO many pilots, and particularly those who have been or are with the Fleet Air Arm, the problems involved in interception might be considered as simple ones. This article is primarily for the benefit of newcomers, but the method used might be adopted by any charter pilot. Although it is obviously impossible to please everyone, we hope to publish from time to time articles of a similar nature covering the many and varied specialised problems involved in air navigation. These will appear either in the Commercial Aviation section or elsewhere, according to the particular scope of the subject matter.

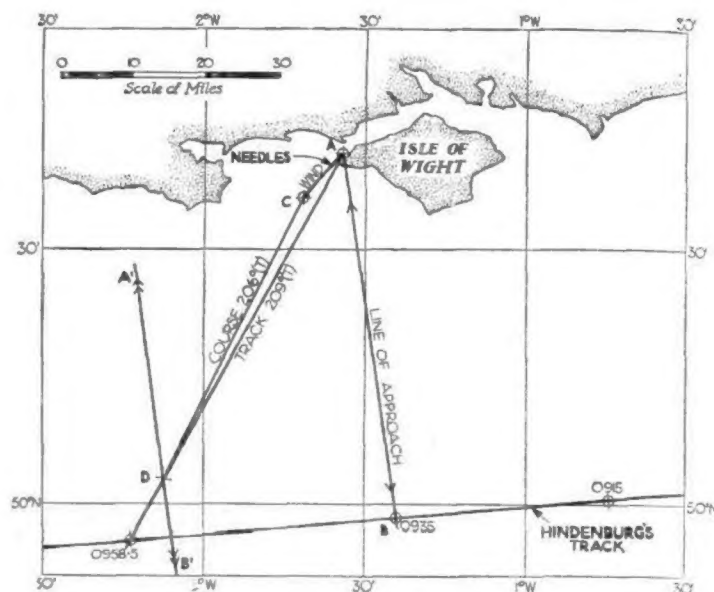
A QUESTION involving interception is nearly always included in the second-class navigators' examination, and the method described below provides a simple and accurate method of solving such problems.

It is realised that experts will find the methods which are already in use to be equally easy, but it is probable that this will be more readily understood by beginners. Both, of course, are equally accurate. Where a map or chart is to be used to work out the question it is not necessary to use any scale other than the scale of the chart. The method is best described by a worked example.

In this the track and ground speed of the craft to be intercepted are given. The first question in the D.R. and D/F paper of the last second-class navigators' examination is a good example and an abridged version, sufficient to show the method of working, reads:—

"The airship *Hindenburg* is flying down the English Channel, on a true track of 266 degrees, and at a ground speed of 90 knots. You are cruising over the Isle of Wight, hoping to intercept her and obtain photographs. The position of the *Hindenburg* at 0915 is Lat. 50 00.5 N., Long., 00 45 W. Your position at 0935 is midway between the Needles Lt. and Hurst Pt. Your airspeed is 125 knots; the wind is from 43° (T) at 25 m.p.h. Find the course to steer in order to intercept and the time of interception."

From the data supplied, fix on the chart the position of both craft at the later given time, i.e. 0935 hrs. Call these two points (see accompanying diagram) A (aeroplane) and B



(*Hindenburg*), and draw a line to join them. Through B lay off the track of the airship, and measure off along this track a distance for any convenient period of time. The period used will depend upon the scale of the chart, and in this particular example 20 minutes or a quarter of an hour are probably most suitable. The first time scale is used in this case. Through a point on the *Hindenburg's* track, which has just been fixed, draw a line parallel to AB, and call it A'B'. From A lay off the wind for the same interval of time, down wind, to the point C. With centre C and radius of airspeed for the same interval of time, draw an arc to cut A'B' at the point D. Then C D is the true course to steer, and A D the true track to intercept.

The point of interception is found from A D produced to cut the *Hindenburg's* track, and the time of interception is calculated from the distance between point B and the point of interception.

J. A. MCGILLIVRAY.

The Crawley Accident

ONCE again it appears that an incorrectly estimated position may have caused the loss of valuable lives, though until a thorough investigation has been made and reported it will be possible only to guess at the cause, or causes, of this error. On the Continent a machine was recently lost through the fact that a reciprocal was mistaken for an actual bearing, or *vice versa*—though the Q-code letters for the two are very different (QTE and QUJ)—and this opens up new and somewhat disquieting possibilities of failure.

In this case a British Airways Fokker F.12, piloted by Flt. Lt. A. P. K. Hattersley and Mr. V. J. W. Bredenkamp, had been brought into Gatwick under a low ceiling and with bad visibility on radio bearings and was due to land at about 3.40 a.m. The control tower staff heard its engines and the pilot was given "motors south" information. He turned away from the airport, evidently to make a wide circuit and a final approach; nothing further was seen or heard until a machine was sent out at daylight to make a search. The Fokker was found in a wood four and a half miles south of Gatwick; the ground height at that point is some three hundred feet higher than that at the airport. Both the pilots were killed in the crash; the engineer, Mr. G.



Flt. Lt. A. P. K. Hattersley

Blower, was rather severely injured, but the radio operator, Mr. C. V. G. Wheeler, escaped with superficial injuries.

Born in 1900, the late Flt. Lt. Arthur Patrick Kilvington Hattersley had, at the time of his death in the Crawley accident last Thursday, reached the front rank of transport pilots.

His experience in this branch of flying began in 1931, when he was a pilot with Northern Air Lines. Later he flew for Commercial Air Hire and took early morning newspaper machines over to Paris for this company. Last year he joined British Continental Airways, with whom he was chief pilot.

Flt. Lt. Hattersley served in the R.F.C. and R.A.F. in 1917 and 1918, with the South African Air Force between 1923 and 1926, and, on his return to this country, was an "A1" instructor at the Central Flying School until 1931.

Mr. V. J. W. Bredenkamp was also a pilot with B.C.A. until the amalgamation of the two concerns. Previously he had served with the Royal Air Force and his rank was Flight Sergeant when he left the Service.

Japan in China

ONE of the first steps in Sino-Japanese commercial co-operation in North China has been the formation of the Huang Aviation Co., which is to run air services between Dairen, Chinchow, Tientsin, Pekin, Kalgan and Jehol. Chinese and Japanese interests have provided equal capital, there is a Chinese president and a Japanese vice-president. Japanese machines and pilots are, it is understood, to be employed.

Air France and North Atlantic

THE French Air Ministry has been considering the various claims of the flying boats which are being built for the non-stop North Atlantic service to be operated by Air France, and have decided to give precedence to the type which the Latécoère Company is building. The construction of this machine, which is derived from the famous *Lieutenant de Vaisseau Paris*, will now be accelerated.